



SEQUENCE LISTING

<110> Schmitz, Juergen  
Dzionic, Andrzej  
Buck, David William

<120> ANTIGEN BINDING FRAGMENTS SPECIFIC FOR DENDRITIC CELLS COMPOSITIONS  
AND METHODS OF USE THEREOF ANTIGENS RECOGNIZED THEREBY AND CELLS  
OBTAINED THEREBY

<130> 212302001100

<140> US 09/714,712

<141> 2000-11-15

<150> US 60/197,205

<151> 2000-04-13

<150> US 60/196,824

<151> 2000-04-11

<150> US 60/180,775

<151> 2000-02-07

<150> US 60/179,003

<151> 2000-01-28

<150> US 60/167,076

<151> 1999-11-23

<150> US 60/165,555

<151> 1999-11-15

<160> 38

<170> PatentIn version 3.0

<210> 1

<211> 1312

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(1312)

<223> BDCA-2 cDNA sequence

<400> 1

cagtgattct cgtgcctcag cctcctgagt agccgaaatt acagacgtgt gccaccatgc

ttggctaatt ttttgattt ttagtagaga tggggtttca ctatgttggc caggctagtc	120
ttgaactcct ggcctgaagc aatccgcca cctcagcctc ccaaagtgt gagattatag	180
gcacgagcca ctacacctgg ccacaaaatt ctttaaagaa gccaatcca tctccctca	240
agagccaagg ggccacctca ccctcttggt acagcagatc ctgcctccac agtcaccctg	300
ctcccaagtg caacctctgt ctgacctgc atggtgtgcg gtgccctcct gcctcaggcc	360
gcgaagaagg atctaagggc ttggcttggt tgaaagaacc acaccccgaa agtaacatct	420
ttggagaaag tgataaca ga gcttctgcac ccacctgata gaggaagtcc aaaggggtgtg	480
cgcacacaca atggtgcctg aagaagagcc tcaagaccga gagaaaggac tctgggtggtt	540
ccagttgaag gtctggtcca tggcagtcgt atccatcttg ctctcagtg tctgtttcac	600
tgtgagttct gtggtgcctc acaattttat gtatagcaaa actgtcaaga ggctgtccaa	660
gttacgagag tatcaacagt atcatccaag cctgacctgc gtcattggaag gaaaggacat	720
agaagattgg agctgctgcc caacccttg gacttcattt cagtctagtt gctactttat	780
ttctactggg atgcaatctt ggactaagag tcaaaagaac tgttctgtga tgggggctga	840
tctggtggtg atcaacacca ggaagaaca ggatttcac attcagaatc tgaaaagaaa	900
ttcttcttat tttctggggc tgtcagatcc agggggctcg cgacattggc aatggggtga	960
ccagacacca tacaatgaaa atgtcacatt ctggcactca ggtgaacca ataacctga	1020
tgagcgttgt gcgataataa atttccgttc ttcagaagaa tggggctgga atgacattca	1080
ctgtcatgta cctcagaagt caatttgcaa gatgaagaag atctacatat aaatgaaata	1140
ttctccctgg aaatgtgttt gggttggcat ccaccgttgt agaaagctaa attgattttt	1200
taatttatgt gtaagttttg tacaaggaat gccctaaaa tgtttcagca ggctgtcacc	1260
tattacactt atgatataat ccaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa	1312

<210> 2  
 <211> 213  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> UNSURE  
 <222> (1)..(213)  
 <223> amino acid sequence of one of the isoforms of BDCA-2 with all six exons expressed

<400> 2

Met Val Pro Glu Glu Glu Pro Gln Asp Arg Glu Lys Gly Leu Trp Trp

1	5	10	15
Phe Gln Leu Lys Val Trp Ser Met Ala Val Val Ser Ile Leu Leu Leu	20	25	30
Ser Val Cys Phe Thr Val Ser Ser Val Val Pro His Asn Phe Met Tyr	35	40	45
Ser Lys Thr Val Lys Arg Leu Ser Lys Leu Arg Glu Tyr Gln Gln Tyr	50	55	60
His Pro Ser Leu Thr Cys Val Met Glu Gly Lys Asp Ile Glu Asp Trp	65	70	75
Ser Cys Cys Pro Thr Pro Trp Thr Ser Phe Gln Ser Ser Cys Tyr Phe	85	90	95
Ile Ser Thr Gly Met Gln Ser Trp Thr Lys Ser Gln Lys Asn Cys Ser	100	105	110
Val Met Gly Ala Asp Leu Val Val Ile Asn Thr Arg Glu Glu Gln Asp	115	120	125
Phe Ile Ile Gln Asn Leu Lys Arg Asn Ser Ser Tyr Phe Leu Gly Leu	130	135	140
Ser Asp Pro Gly Gly Arg Arg His Trp Gln Trp Val Asp Gln Thr Pro	145	150	155
Tyr Asn Glu Asn Val Thr Phe Trp His Ser Gly Glu Pro Asn Asn Leu	165	170	175
Asp Glu Arg Cys Ala Ile Ile Asn Phe Arg Ser Ser Glu Glu Trp Gly	180	185	190
Trp Asn Asp Ile His Cys His Val Pro Gln Lys Ser Ile Cys Lys Met	195	200	205
Lys Lys Ile Tyr Ile	210		

<210> 3  
 <211> 1227  
 <212> DNA  
 <213> Mus musculus

<220>  
 <221> CDS  
 <222> (146)..(775)  
 <223> coding sequence of mouse Dectin-2

<300>

<308> AF240357  
 <309> 2000-05-02  
 <313> (1)..(1227)

<400> 3  
cattggcccg ctctgtggca tttaactcaa gtgtgtgtgg aagttgattc tgaactctgg 60  
cctcttttgac agaagccagg tccctgagtc gtatttttga gacagatgca agaaaccctt 120  
gacctttctga acatacacct caaca atg gtg cag gaa aga caa tcc caa ggg 172  
Met Val Gln Glu Arg Gln Ser Gln Gly  
1 5  
aag gga gtc tgc tgg acc ctg aga ctc tgg tca gct gct gtg att tcc 220  
Lys Gly Val Cys Trp Thr Leu Arg Leu Trp Ser Ala Ala Val Ile Ser  
10 15 20 25  
atg tta ctc ttg agt acc tgt ttc att gcg agc tgt gtg gtg act tac 268  
Met Leu Leu Leu Ser Thr Cys Phe Ile Ala Ser Cys Val Val Thr Tyr  
30 35 40  
caa ttt att atg gac cag ccc agt aga aga cta tat gaa ctt cac aca 316  
Gln Phe Ile Met Asp Gln Pro Ser Arg Arg Leu Tyr Glu Leu His Thr  
45 50 55  
tac cat tcc agt ctc acc tgc ttc agt gaa ggg act atg gtg tca gaa 364  
Tyr His Ser Ser Leu Thr Cys Phe Ser Glu Gly Thr Met Val Ser Glu  
60 65 70  
aaa atg tgg gga tgc tgc cca aat cac tgg aag tca ttt ggc tcc agc 412  
Lys Met Trp Gly Cys Cys Pro Asn His Trp Lys Ser Phe Gly Ser Ser  
75 80 85  
tgc tac ctc att tct acc aag gag aac ttc tgg agc acc agt gag cag 460  
Cys Tyr Leu Ile Ser Thr Lys Glu Asn Phe Trp Ser Thr Ser Glu Gln  
90 95 100 105  
aac tgt gtt cag atg ggg gct cat ctg gtg gtg atc aat act gaa gcg 508  
Asn Cys Val Gln Met Gly Ala His Leu Val Val Ile Asn Thr Glu Ala  
110 115 120  
gag cag aat ttc atc acc cag cag ctg aat gag tca ctt tct tac ttc 556  
Glu Gln Asn Phe Ile Thr Gln Gln Leu Asn Glu Ser Leu Ser Tyr Phe  
125 130 135  
ctg ggt ctt tcg gat cca caa ggt aat ggc aaa tgg caa tgg atc gat 604  
Leu Gly Leu Ser Asp Pro Gln Gly Asn Gly Lys Trp Gln Trp Ile Asp  
140 145 150  
gat act cct ttc agt caa aat gtc agg ttc tgg cac ccc cat gaa ccc 652  
Asp Thr Pro Phe Ser Gln Asn Val Arg Phe Trp His Pro His Glu Pro  
155 160 165  
aat ctt cca gaa gag cgg tgt gtt tca ata gtt tac tgg aat cct tcg 700  
Asn Leu Pro Glu Glu Arg Cys Val Ser Ile Val Tyr Trp Asn Pro Ser  
170 175 180 185  
aaa tgg ggc tgg aat gat gtt ttc tgt gat agt aaa cac aat tca ata 748  
Lys Trp Gly Trp Asn Asp Val Phe Cys Asp Ser Lys His Asn Ser Ile  
190 195 200  
tgt gaa atg aag aag att tac cta tga gtgcctgtta ttcattaata 795  
Cys Glu Met Lys Lys Ile Tyr Leu  
205

tcttttaaagt tcagacctac caagaagcca taactttcttg gcctgtacat ctgacagagg 855  
 ccgttctttt cctagccact attctttact caaacagaat gagccctttc tcctttctgat 915  
 ggtagagtt ttgtcaactt gacacaaact agagtcacct ggggagtagg atcttcagct 975  
 aaggaattgc ctctgtcagc ttgaccagtc agcatgtctg ggggcatttt cttgattaat 1035  
 gattgttgta agagggtcca ggtggtaagc aaaggtgtta aacccatgaa gagcaagcca 1095  
 gggagcatca tccatccatc tctgccctca ggtttctgcc ccagggtctt gccctggttt 1155  
 ctttctatga actgctgtta cttgaaagta taagatgaat aaacaatttc atccaaaaaa 1215  
 aaaaaaaaaa aa 1227

<210> 4  
 <211> 209  
 <212> PRT  
 <213> Mus musculus

<400> 4

Met	Val	Gln	Glu	Arg	Gln	Ser	Gln	Gly	Lys	Gly	Val	Cys	Trp	Thr	Leu
1				5					10					15	
Arg	Leu	Trp	Ser	Ala	Ala	Val	Ile	Ser	Met	Leu	Leu	Leu	Ser	Thr	Cys
			20					25					30		
Phe	Ile	Ala	Ser	Cys	Val	Val	Thr	Tyr	Gln	Phe	Ile	Met	Asp	Gln	Pro
		35					40					45			
Ser	Arg	Arg	Leu	Tyr	Glu	Leu	His	Thr	Tyr	His	Ser	Ser	Leu	Thr	Cys
	50					55					60				
Phe	Ser	Glu	Gly	Thr	Met	Val	Ser	Glu	Lys	Met	Trp	Gly	Cys	Cys	Pro
65					70					75					80
Asn	His	Trp	Lys	Ser	Phe	Gly	Ser	Ser	Cys	Tyr	Leu	Ile	Ser	Thr	Lys
				85					90					95	
Glu	Asn	Phe	Trp	Ser	Thr	Ser	Glu	Gln	Asn	Cys	Val	Gln	Met	Gly	Ala
			100					105					110		
His	Leu	Val	Val	Ile	Asn	Thr	Glu	Ala	Glu	Gln	Asn	Phe	Ile	Thr	Gln
		115					120					125			
Gln	Leu	Asn	Glu	Ser	Leu	Ser	Tyr	Phe	Leu	Gly	Leu	Ser	Asp	Pro	Gln
	130					135					140				
Gly	Asn	Gly	Lys	Trp	Gln	Trp	Ile	Asp	Asp	Thr	Pro	Phe	Ser	Gln	Asn
145					150					155					160
Val	Arg	Phe	Trp	His	Pro	His	Glu	Pro	Asn	Leu	Pro	Glu	Glu	Arg	Cys
				165					170					175	
Val	Ser	Ile	Val	Tyr	Trp	Asn	Pro	Ser	Lys	Trp	Gly	Trp	Asn	Asp	Val
			180					185					190		

Phe Cys Asp Ser Lys His Asn Ser Ile Cys Glu Met Lys Lys Ile Tyr  
 195 200 205

Leu

<210> 5  
 <211> 237  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> UNSURE  
 <222> (1)..(237)  
 <223> amino acid sequence of human DCIR

<300>  
 <308> AJ133532  
 <309> 1999-09-01  
 <313> (1)..(237)

<400> 5

Met Thr Ser Glu Ile Thr Tyr Ala Glu Val Arg Phe Lys Asn Glu Phe  
 1 5 10 15  
 Lys Ser Ser Gly Ile Asn Thr Ala Ser Ser Ala Ala Ser Lys Glu Arg  
 20 25 30  
 Thr Ala Pro His Lys Ser Asn Thr Gly Phe Pro Lys Leu Leu Cys Ala  
 35 40 45  
 Ser Leu Leu Ile Phe Phe Leu Leu Leu Ala Ile Ser Phe Phe Ile Ala  
 50 55 60  
 Phe Val Ile Phe Phe Gln Lys Tyr Ser Gln Leu Leu Glu Lys Lys Thr  
 65 70 75 80  
 Thr Lys Glu Leu Val His Thr Thr Leu Glu Cys Val Lys Lys Asn Met  
 85 90 95  
 Pro Val Glu Glu Thr Ala Trp Ser Cys Cys Pro Lys Asn Trp Lys Ser  
 100 105 110  
 Phe Ser Ser Asn Cys Tyr Phe Ile Ser Thr Glu Ser Ala Ser Trp Gln  
 115 120 125  
 Asp Ser Glu Lys Asp Cys Ala Arg Met Glu Ala His Leu Leu Val Ile  
 130 135 140  
 Asn Thr Gln Glu Glu Gln Asp Phe Ile Phe Gln Asn Leu Gln Glu Glu  
 145 150 155 160  
 Ser Ala Tyr Phe Val Gly Leu Ser Asp Pro Glu Gly Gln Arg His Trp  
 165 170 175  
 Gln Trp Val Asp Gln Thr Pro Tyr Asn Glu Ser Ser Thr Phe Trp His

180 185 190  
 Pro Arg Glu Pro Ser Asp Pro Asn Glu Arg Cys Val Val Leu Asn Phe  
 195 200 205

Arg Lys Ser Pro Lys Arg Trp Gly Trp Asn Asp Val Asn Cys Leu Gly  
 210 215 220

Pro Gln Arg Ser Val Cys Glu Met Met Lys Ile His Leu  
 225 230 235

<210> 6  
 <211> 5  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> basic unit of a linking peptide

<400> 6

Gly Gly Gly Gly Ser  
 1 5

<210> 7  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> primer

<400> 7  
 ttgaaagaac cacaccccga aagt

24

<210> 8  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> primer

<400> 8  
 tagctttcta caacggtgga tgcc

24

<210> 9  
 <211> 4  
 <212> PRT  
 <213> Homo sapiens

<400> 9

Asn Cys Ser Val  
 1

<210> 10  
<211> 4  
<212> PRT  
<213> Homo sapiens

<400> 10

Asn Ser Ser Tyr  
1

<210> 11  
<211> 4  
<212> PRT  
<213> Homo sapiens

<400> 11

Asn Val Thr Phe  
1

<210> 12  
<211> 4  
<212> PRT  
<213> Mus musculus

<400> 12

Asn Glu Ser Leu  
1

<210> 13  
<211> 4  
<212> PRT  
<213> Homo sapiens

<400> 13

Asn Glu Ser Ser  
1

<210> 14  
<211> 4  
<212> PRT  
<213> Homo sapiens

<400> 14

Lys Arg Leu Ser  
1

<210> 15  
<211> 4  
<212> PRT  
<213> Homo sapiens



<400> 15

Lys Lys Thr Thr  
1

<210> 16

<211> 4

<212> PRT

<213> Homo sapiens

<400> 16

Thr Arg Glu Glu  
1

<210> 17

<211> 4

<212> PRT

<213> Homo sapiens

<400> 17

Ser Ser Glu Glu  
1

<210> 18

<211> 4

<212> PRT

<213> Mus musculus

<400> 18

Ser Thr Lys Glu  
1

<210> 19

<211> 4

<212> PRT

<213> Mus musculus

<400> 19

Ser Thr Ser Glu  
1

<210> 20

<211> 4

<212> PRT

<213> Mus musculus

<400> 20

Thr Glu Ala Glu

1

<210> 21  
<211> 4  
<212> PRT  
<213> Mus musculus

<400> 21

Ser Ile Cys Glu

1

<210> 22  
<211> 4  
<212> PRT  
<213> Homo sapiens

<400> 22

Thr Tyr Ala Glu

1

<210> 23  
<211> 4  
<212> PRT  
<213> Homo sapiens

<400> 23

Thr Thr Lys Glu

1

<210> 24  
<211> 4  
<212> PRT  
<213> Homo sapiens

<400> 24

Thr Thr Leu Glu

1

<210> 25  
<211> 4  
<212> PRT  
<213> Homo sapiens

<400> 25

Ser Trp Gln Asp

1

<210> 26  
<211> 4

<212> PRT  
<213> Homo sapiens

<400> 26

Ser Glu Lys Asp  
1

<210> 27  
<211> 4  
<212> PRT  
<213> Homo sapiens

<400> 27

Thr Gln Glu Glu  
1

<210> 28  
<211> 8  
<212> PRT  
<213> Homo sapiens

<220>  
<221> UNSURE  
<222> (1)..(8)  
<223> Tyrosine kinase phosphorylation site in human BDCA-2

<400> 28

Lys Leu Arg Glu Tyr Gln Gln Tyr  
1 5

<210> 29  
<211> 4  
<212> PRT  
<213> Homo sapiens

<400> 29

Ser Val Cys Glu  
1

<210> 30  
<211> 4  
<212> PRT  
<213> Homo sapiens

<400> 30

Ser Val Cys Glu  
1

<210> 31  
<211> 9

<212> PRT  
<213> Mus musculus

<220>  
<221> UNSURE  
<222> (1)..(9)  
<223> Tyrosine kinase phosphorylation site in mouse dectin-2

<400> 31

Arg Arg Leu Tyr Glu Leu His Thr Tyr  
1 5

<210> 32  
<211> 4  
<212> PRT  
<213> Homo sapiens

<400> 32

Gly Gly Arg Arg  
1

<210> 33  
<211> 6  
<212> PRT  
<213> Mus musculus

<220>  
<221> UNSURE  
<222> (1)..(6)  
<223> N-myristylation site in mouse dectin-2

<400> 33

Gly Val Cys Trp Thr Leu  
1 5

<210> 34  
<211> 6  
<212> PRT  
<213> Mus musculus

<220>  
<221> UNSURE  
<222> (1)..(6)  
<223> N-myristylation site in mouse dectin-2

<400> 34

Gly Thr Met Val Ser Glu  
1 5

<210> 35  
<211> 6  
<212> PRT  
<213> Mus musculus

<220>  
<221> UNSURE  
<222> (1)..(6)  
<223> N-myristylation site in mouse dectin-2

<400> 35

Gly Cys Cys Pro Asn His  
1 5

<210> 36  
<211> 6  
<212> PRT  
<213> Homo sapiens

<220>  
<221> UNSURE  
<222> (1)..(6)  
<223> N-myristylation site in human DCIR

<400> 36

Gly Ile Asn Thr Ala Ser  
1 5

<210> 37  
<211> 6  
<212> PRT  
<213> Unknown

<220>  
<223> consensus ITIM motif

<220>  
<221> misc\_feature  
<222> (2)..(5)  
<223> consensus immunoreceptor tyrosine-based inhibitory motif  
(ITIM motif) (I/V)XYXX(L/V),  
amino acid "X" from position 2, 4 and 5 can be any amino acid

<220>  
<221> misc\_feature  
<222> (1)..(1)  
<223> amino acid "X" at position 1 can be either amino acid "I " or "V"

<220>

<221> misc\_feature

<222> (6)..(6)

<223> amino acid "X" at position 6 can be either amino acid "L " or "V"

<400> 37

Xaa Xaa Tyr Xaa Xaa Xaa  
1 5

<210> 38

<211> 6

<212> PRT

<213> Homo sapiens

<220>

<221> UNSURE

<222> (1)..(6)

<223> immunoreceptor tyrosine-based inhibitory motif (ITIM motif) in  
DCIR

<400> 38

Ile Thr Tyr Ala Glu Val  
1 5